

In cases where the monitored signal is not already in digital form, the apparatus can advantageously include analogue/digital conversion means for operating on the signal produced by the aforesaid means for monitoring the telecommunications signals.

It should also be appreciated that the present invention can comprise means for achieving passive monitoring of a telecommunications network or call-centre etc.

The means for identifying the at least one predetermined parameter advantageously includes a Digital Signal Processor which can be arranged to operate in accordance with any appropriate algorithm. Preferably, the signal processing required by the means for identifying the at least one parameter can advantageously be arranged to be provided by spare capacity arising in the Digital Signal Processors found within the apparatus and primarily arranged for controlling the monitoring, compression and/or recording of signals.

As mentioned above, the particular parameters arranged to be identified by the apparatus can be selected from those that are considered appropriate to the requirements of, for example, the call-centre provider.

However, for further illustration, the following is a non-exhaustive list of parameters that could be identified in accordance with the present invention and assuming that the telecommunications traffic concerned comprises a

plurality of two-way telephone interactions such as conversations:

- 5       - non-voice elements within predominantly voice-related interactions for example dialling, Interactive Voice Response Systems, and recorded speech such as interactive voice response prompts, computer synthesized speech or background noise such as line noise;
- 10       - the relationship between transmissions in each direction, for example the delay occurring, or the overlap between, transmissions in opposite directions;
- 15       - the amplitude envelope of the signals, so as to determine caller anger or episodes of shouting;
- 15       - the frequency spectrum of the signal in various frequency bands;
- 20       - advanced parameters characterizing the actual speaker which may advantageously be used in speech authentication;
- 20       - measures of the speed of interaction, for example for determining the ratio of word to inter-word pauses;
- 25       - the language used by the speaker(s);
- 25       - the sex of the speaker(s);
- 25       - the presence or absence of particular words, for example word spotting using advanced speech recognition techniques;
- 30       - the frequency and content of prosody including pauses, repetitions, stutters and nonsensical utterances in the conversation;

